DOCUMENT RESUME

ED 323 411 CE 055 829

TITLE	Present Information with Models, Real Objects, and Flannel Boards. Second Edition. Module C-22 of Category C--Instructional Execution. Professional Teacher Education Module Series.
INSTITUTION	Ohio State Univ., Columbus. National Center for Research in Vocational Education.
SPONS AGENCY	Department of Education, Washington, DC.
REPORT NO	ISBN-0-89606-221-X
PUB DATE	87
NOTE	52p.; For related modules, see ED 308 368-369 and CE 055 828-836.
AVAILABLE FROM	American Association for Vocational Instructional Materials, 745 Gaines School Road, Athens, GA 30605.
PUB TYPE	Guides - Classroom Use - Materials (For Learner) (051)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	*Competency Based Education; *Models; Postsecondary Education; *Realia; *Teacher Developed Materials; *Teacher Education; Vocational Education
IDENTIFIERS	*Flannel Boards

ABSTRACT

This document, one of more than 100 performance-based vocational teacher education modules, prepares pre- and inservice teachers to present information with models, real objects, and flannel boards. After an introduction, the document contains an explanatory section on the organization of the module, required and optional learning activities, information sheets and required readings, student self-check evaluation forms that cover learning activities, model answers for the forms, and a form on which the teacher's performance on the module's terminal objective ("In an actual teaching situation, present information with a flannel board and a model or real object") is to be assessed. (CML)

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Present Information with Models, Real Objects, and Flannel Boards

Second Edition

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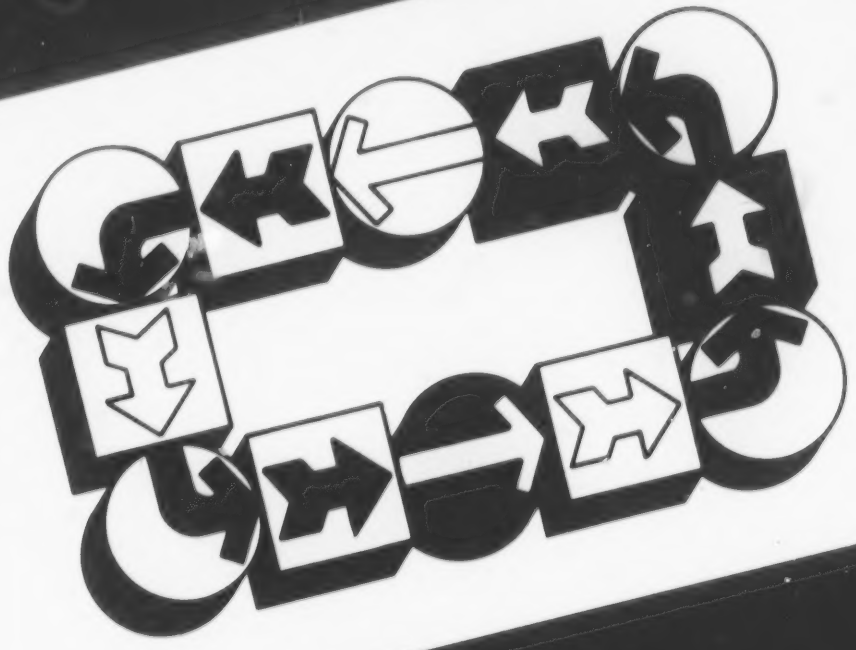

CE055829

AMERICAN ASSOCIATION FOR VOCATIONAL INSTRUCTIONAL MATERIALS
The University of Georgia
120 Driftmier Engineering Center / Athens GA 30602

THE NATIONAL CENTER FOR RESEARCH IN VOCATIONAL EDUCATION
THE OHIO STATE UNIVERSITY
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FOREWORD

This module is one of a series of 127 performance-based teacher education (PBTE) learning packages focusing upon specific professional competencies of vocational teachers. The competencies upon which these modules are based were identified and verified through research as being important to successful vocational teaching at both the secondary and postsecondary levels of instruction. The modules are suitable for the preparation of teachers and other occupational trainers in all occupational areas.

Each module provides learning experiences that integrate theory and application; each culminates with criterion-referenced assessment of the teacher's (instructor's, trainer's) performance of the specified competency. The materials are designed for use by teachers-in-training working individually or in groups under the direction and with the assistance of teacher educators or others acting as resource persons. Resource persons should be skilled in the teacher competencies being developed and should be thoroughly oriented to PBTE concepts and procedures before using these materials.

The design of the materials provides considerable flexibility for planning and conducting performance-based training programs for preservice and inservice teachers, as well as business-industry-labor trainers, to meet a wide variety of individual needs and interests. The materials are intended for use by universities and colleges, state departments of education, postsecondary institutions, local education agencies, and others responsible for the professional development of vocational teachers and other occupational trainers.

The PBTE curriculum packages in Categories A – J are products of a sustained research and development effort by the National Center's Program for Professional Development for Vocational Education. Many individuals, institutions, and agencies participated with the National Center and have made contributions to the systematic development, testing, revision, and refinement of these very significant training materials. Calvin J. Cotrell directed the vocational teacher competency research study upon which these modules are based and also directed the curriculum development effort from 1971 – 1972. Curtis R. Finch provided leadership for the program from 1972 – 1974. Over 40 teacher educators provided input in development of initial versions of the modules; over 2,000 teachers and 300 resource persons in 20 universities, colleges, and postsecondary institutions used the materials and provided feedback to the National Center for revisions and refinement.

Early versions of the materials were developed by the National Center in cooperation with the vocational teacher education faculties at Oregon State University and at the University of Missouri–Columbia. Preliminary testing of the materials was conducted at Oregon State University, Temple University, and the University of Missouri–Columbia.

Following preliminary testing, major revision of all materials was performed by National Center staff, with the assistance of numerous consultants and visiting scholars from throughout the country.

Advanced testing of the materials was carried out with assistance of the vocational teacher educators and students of Central Washington State College; Colorado State University; Ferris State College, Michigan; Florida State University; Holland College, P.E.I., Canada; Oklahoma State University; Rutgers University, New Jersey; State University College at Buffalo, New York; Temple University, Pennsylvania; University of Arizona; University of Michigan–Flint; University of Minnesota–Twin Cities; University of Nebraska–Lincoln; University of Northern Colorado; University of Pittsburgh, Pennsylvania; University of Tennessee; University of Vermont; and Utah State University.

The first published edition of the modules found widespread use nationwide and in many other countries of the world. User feedback from such extensive use, as well as the passage of time, called for the updating of the content, resources, and illustrations of the original materials. Furthermore, three new categories (K–M) had been added to the series, covering the areas of serving students with special/exceptional needs, improving students' basic and personal skills, and implementing competency-based education. This addition required the articulation of content among the original modules and those of the new categories.

Recognition is extended to the following individuals for their roles in the revision of the original materials: Lois G. Harrington, Catherine C. King-Fitch and Michael E. Wonacott, Program Associates, for revision of content and resources; Cheryl M. Lowry, Research Specialist, for illustration specifications; and Barbara Shea for artwork. Special recognition is extended to the staff at AAVIM for their invaluable contributions to the quality of the final printed products, particularly to Sylvia Conine for typesetting; to Marilyn MacMillan for module layout, design, and final artwork; and to George W. Smith, Jr. for supervision of the module production process.

THE NATIONAL CENTER
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The National Center for Research in Vocational Education's mission is to increase the ability of diverse agencies, institutions, and organizations to solve educational problems relating to individual career planning, preparation, and progression. The National Center fulfills its mission by:

- Generating knowledge through research
- Developing educational programs and products
- Evaluating individual program needs and outcomes
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- Operating information systems and services
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Direction is given by a representative from each of the states, provinces and territories. AAVIM also works closely with teacher organizations, government agencies and industry.

MODULE C-22

Present Information with Models, Real Objects, and Flannel Boards

Second Edition

Module C-22 of Category C—Instructional Execution
PROFESSIONAL TEACHER EDUCATION MODULE SERIES

The National Center for Research in Vocational Education
The Ohio State University

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1987

ISBN 0-89606-221-X

Published and distributed by the **American Association for Vocational Instructional Materials (AAVIM)**, 120 Driftmier Engineering Center, The University of Georgia, Athens, Georgia 30602, (404) 542-2586.

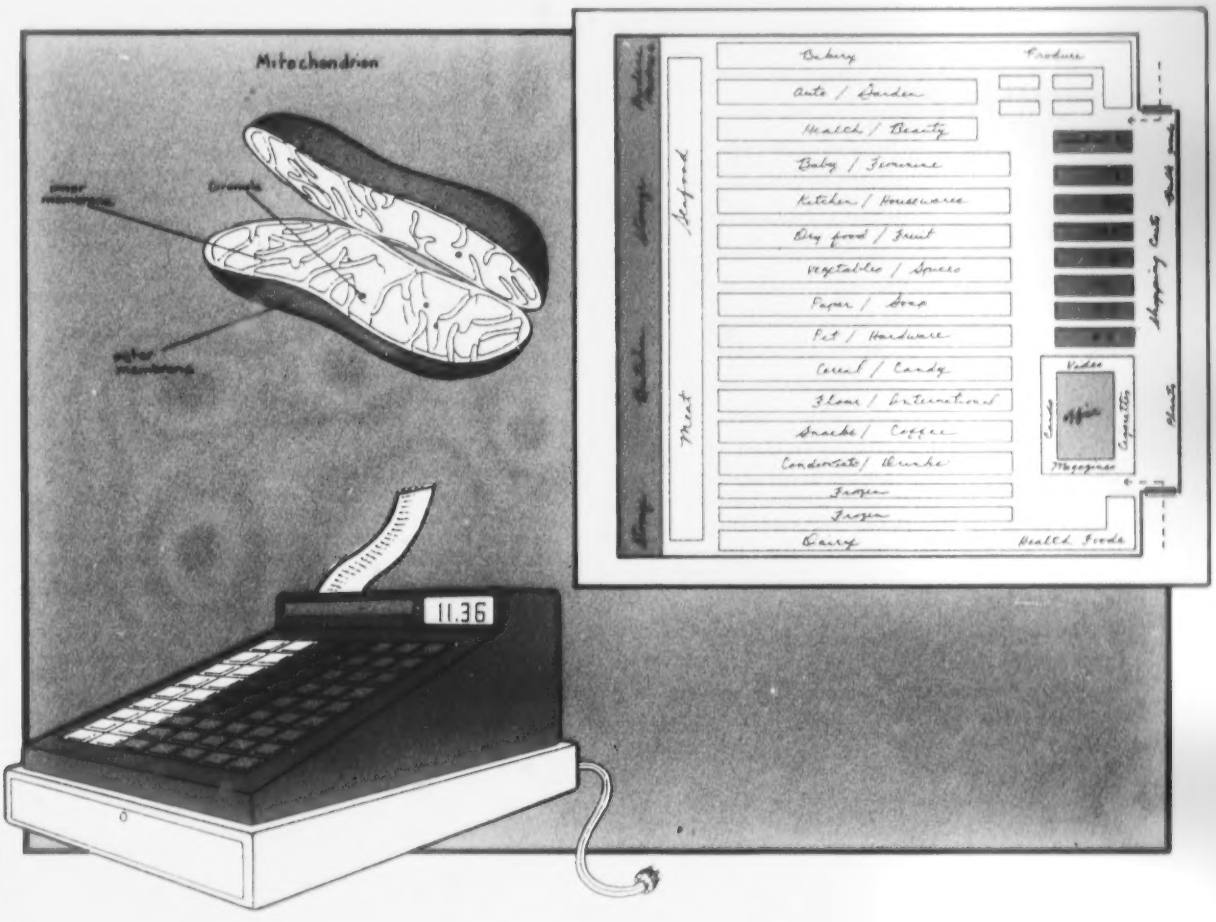
INTRODUCTION

This module focuses on three common and effective teaching devices that can be used to present information—flannel boards, models, and real objects. These devices can require students to use many of their senses—sight, touch, hearing, taste, and smell—which can make learning easier and result in better retention.

The flannel board, one of the oldest means of illustrating ideas, has been used effectively at all levels of education. Properly planned and presented, the flannel board can be a colorful, inexpensive, and effective way to illustrate your lessons. For example, flannel board figures can provide an inexpensive means of illustrating the size/proportion relationships of objects that would be impractical or impossible to bring into the classroom. A marketing and distributive education class, for example, could study the traffic patterns and display locations in a supermarket using flannel board figures.

Models are three-dimensional, scale representations of real objects. Some have cutaway sections to allow easy viewing of components that normally are not exposed. Others have moving parts that resemble those in the real object. For example, a cutaway model would be useful in illustrating the parts of a seed. However, the operation of a cash register would be more effectively illustrated using an actual register—a real object.

This module is designed to give you an understanding of the various ways in which you can use a flannel board, model, or real object to present information and to give you skill in choosing and using the device that is the most effective for your objective.



ABOUT THIS MODULE

Objectives

Terminal Objective: In an actual teaching situation, present information with a flannel board and a model or real object. Your performance will be assessed by your resource person, using the Teacher Performance Assessment Form, pp. 45–46 (*Learning Experience III*).

Enabling Objectives:

1. After completing the required reading, present information with a flannel board (*Learning Experience I*).
2. After completing the required reading, present information with a model or real object (*Learning Experience II*).

Prerequisites

To complete this module, you must have competency in developing a lesson plan. If you do not already have this competency, meet with your resource person to determine what method you will use to gain this skill. One option is to complete the information and practice activities in the following module:

- *Develop a Lesson Plan*, Module B-4

Resources

A list of the outside resources that supplement those contained within the module follows. Check with your resource person (1) to determine the availability and the location of these resources, (2) to locate additional references in your occupational specialty, and (3) to get assistance in setting up activities with peers or observations of skilled teachers, if necessary. Your resource person may also be contacted if you have any difficulty with directions or in assessing your progress at any time.

Learning Experience I

Required

A flannel board and flannel figures to use in presenting information in a lesson.

2–5 peers to role-play students to whom you are presenting a lesson, and to critique your performance. If peers are unavailable, you may present your lesson to your *resource person*.

Optional

A resource person to review the adequacy of your lesson plan.

Videotape equipment to use in taping, viewing, and self-evaluating your presentation.

Learning Experience II

Required

A model or real object to use in presenting information in a lesson.

2–5 peers to role-play students to whom you are presenting a lesson, and to critique your performance. If peers are unavailable, you may present your lesson to your *resource person*.

Optional

A resource person to review the adequacy of your lesson plan.

Videotape equipment to use in taping, viewing, and self-evaluating your presentation.

Learning Experience III

Required

An actual teaching situation in which you can present information with a flannel board and a model or real object.

A resource person to assess your competency in presenting information with a flannel board and a model or real object.

General Information

For information about the general organization of each performance-based teacher education (PBTE) module, general procedures for its use, and terminology that is common to all the modules, see About Using the National Center's PBTE Modules on the inside back cover. For more in-depth information on how to use the modules in [illegible] you may wish to refer to [illegible]

[illegible] *Performance-Based Teacher Education* [illegible] preservice and [illegible] to PBTE in [illegible]

[illegible] *Performance-Based Teacher Education Modules* can help prospective resource [illegible] inservice teachers [illegible] development of professional [illegible] competencies through use of the PBTE modules. It also includes lists of all the module competencies, as well as a listing of the supplementary resources and the addresses where they can be obtained.

The Guide to the Implementation of Performance-Based Teacher Education is designed to help those who will administer the PBTE program. It contains answers to implementation questions, possible solutions to problems, and alternative [illegible]

Learning Experience I

OVERVIEW

After completing the required reading, present information with a flannel board.

You will be reading the information sheet, Using a Flannel Board, pp. 7–10.

You will be selecting an objective in your occupational specialty that lends itself to using a flannel board to present information.

You will be selecting, modifying, or developing a lesson plan designed to achieve that objective using a flannel board to present information.

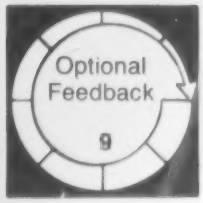
You may wish to have your resource person review the adequacy of your plan.

You will be obtaining or making a flannel board and the flannel figures needed for your presentation.

You will be presenting the lesson to a group of peers or to your resource person.

You may wish to record your presentation on videotape for self-evaluation purposes.

Your competency in presenting information with a flannel board will be evaluated by your peers or by your resource person, using copies of the Presentation Checklist: Flannel Board, pp. 13–23.



If you videotape your presentation, you may wish to evaluate your own performance, using a copy of the Presentation Checklist: Flannel Board, pp. 13–23.

Activity 1

For information explaining the use of the flannel board in presenting information, how to plan your flannel board presentation, and how to prepare a flannel board, read the following information sheet.

USING A FLANNEL BOARD

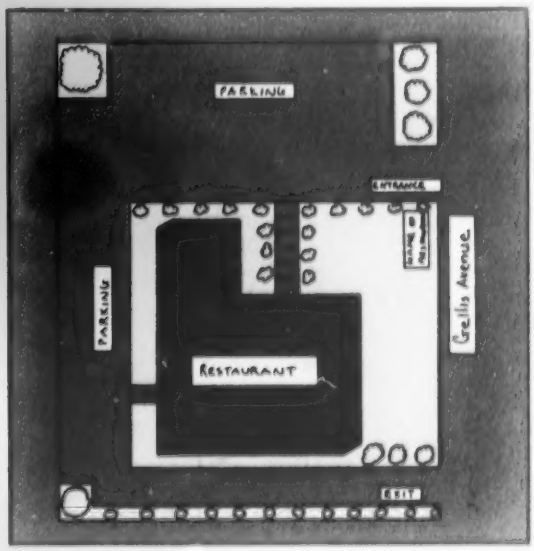
The flannel board—as used by many educators and industrial representatives—can be a dynamic teaching tool. It is a stationary or portable surface covered with a rough flannel-like cloth, usually grey, black, or dark blue in color. Flannel figures and flannel-backed cutouts—pictures, magazine or newspaper clippings, graphs, drawings, and text material—readily adhere to the surface without tape or thumbtacks.

Using a flannel board, it is possible to construct and develop an idea, step by step, in a very dramatic and effective manner. When the lesson is over, the flannel figures can easily be filed for use in future lessons.

When to Use the Flannel Board

Before deciding to use the flannel board to illustrate lesson content, you need to consider certain guidelines, as follows, to determine whether the flannel board is applicable to your situation.

Do the objectives of the lesson require knowledge that could be grasped by the students through the use of the flannel board? For example, a good plan for the relative positions of shrubbery, trees, buildings, and sidewalks could be depicted to students studying landscaping by using the flannel board.



Are the objectives of the lesson more suited to the use of the flannel board than to the use of other devices? For example, will factors such as cost, safety, size, accessibility, or other circumstances make the use of other devices impractical or less effective?

Does the flannel board lend itself well to the concepts being taught and the environment in which it will be used? For example, blown-up pictures of various types of welding beads could be backed by flannel and mounted on a flannel board to illustrate the appearance of good and poor welding beads. In this instance, the flannel board could be used to explain and illustrate a lab activity in which real objects would be used.

Could the flexibility of the flannel board contribute to the involvement of students in the lesson being taught? For example, the lesson could be more effective if students were involved in preparing the flannel board figures or in manipulating them during the lesson.

Could the use of a flannel board contribute to the achievement of lesson objectives? Could it be used to arouse interest during the introduction of the lesson, to highlight the key points of the lesson, to summarize the lesson, or to test students' knowledge of the lesson?

In electronics, for example, a lesson on public address systems could start with the use of flannel figures to represent the various stages (components) of an amplifier. By using the flannel board to involve the students in the identification of the various amplifier components and what happens as they are added to the system, you can arouse interest and review past lessons.

The Script

Special attention should be given to lesson planning when a device such as a flannel board is to be used. It is recommended that a script—describing what will be done or said as each flannel figure is placed on the board—be developed and made part of the lesson plan.

The flannel pieces to be used should be keyed with numbers indicating the order in which they are to be placed on the board. The script should then be keyed with corresponding numbers.

The script may also indicate approximately how much time will be spent on each phase of the lesson. However, it should include enough flexibility to allow for student questions and interaction. It should help **you** discuss the major points in the lesson with students and help **students** apply that information to their own problems or needs.

The script could be written on index cards for ease of handling during a lesson. Sample 1 shows an example of a partial script that might appear on an index card.

SAMPLE 1

PARTIAL SCRIPT

No.	Flannel Figure	Time Est.	Question and Comments
1	Picture of radio antenna	2 min.	What am I placing on the flannel board? (Call on student.) What does the radio antenna do for a radio receiver, and how does it work? (Call on student.)
2	Picture of IF transformers and local oscillator	3 min.	This picture—what does it represent? What frequencies are operating in this stage of the radio?

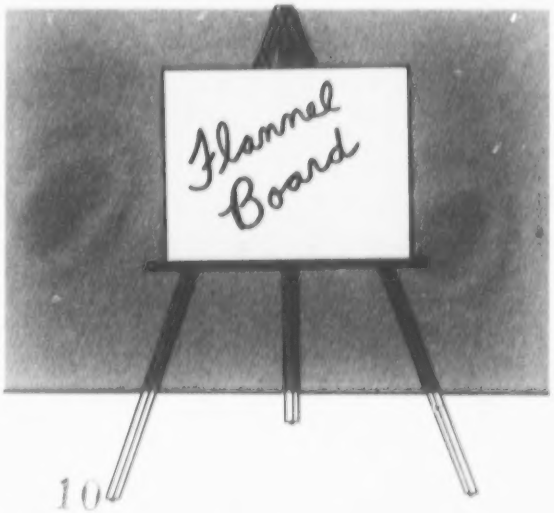
Rehearsal

At least until you are experienced in using the flannel board technique, it is recommended that you rehearse your presentations. During the rehearsal, you can check the amount of time required and verify whether you are illustrating the key points of the lesson in a clear, forceful, and logical manner.

You should try to follow your script as much as possible, but don't let it force you into an awkward or unnatural manner of presentation. You cannot always anticipate the kind or number of questions likely to be raised, so you must be prepared to be flexible.

Make sure the flannel board is placed so that all students will be able to see it. Also make sure that all figures, lettering, and numbers are big enough to be easily seen from the farthest point in the room. Teachers often set the flannel board on a painting easel. This allows for flexibility in positioning the flannel board in the room and in adjusting its height. Use of an easel also allows the top of the flannel board to slant back so that flannel figures hang better.

You may wish to use hooks and screw eyes with your flannel board and hang it from a wall, in front of a bulletin board, or in front of a chalkboard. To get the flannel figures to stick to the board better, try sliding them downward onto the board rather than just pressing them straight on—this locks the fibers together better. Give attention to spacing and sequencing the presentation of materials to gain maximum results.



How to Prepare a Flannel Board

Writing the script and even making the flannel board itself can be handled by you, the instructor, or students can be involved in these activities. Committees of students can be assigned to various responsibilities leading to the finished product. The students usually feel a sense of pride in their contributions and, most important, may appreciate the significance of the lessons even more if they are involved in developing the visual aids.

You can either make or buy your own flannel board and figures. Flannel boards may usually be purchased from local dealers for approximately $15 to $25.

If you want to make a flannel board, you should find it an easy, inexpensive task. A diagram of a handy, popular-sized flannel board and a list of the materials needed and procedures for assembly are shown in sample 2.

The cutouts, line-drawings, symbols, figures, charts, graphs, or other materials that you plan to use on the flannel board may also be designed and produced by you and your class. An easy way to get good, large numbers, letters, and figures is to use stencils for patterns. To enlarge something, try using an opaque or transparency projector. Project the image on a wall, tape the felt material to the wall, and simply outline the figure that is to be cut out. Some art supply stores and bookstores carry ready-made felt letters, figures, and symbols.

It is important that you use color to enhance the attractiveness of your material, so pick out materials with colors that contrast, but do not clash. To keep your flannel figures vital and in good condition, store them in a flat folder or in a shallow cardboard box to prevent soiling and bending.

Hook-and-Loop Board

For devices too heavy to hang on a flannel board (such as metal parts and tools), you may find the commercial hook-and-loop board even more valuable as a visual aid than the flannel board. The hook-and-loop board is a variation of the flannel board, but instead of flannel backing, the board is covered with a nylon material with thousands of small loops on its surface.

The objects or figures to be hung on the board have a strip of material attached to them that has thousands of hooks that cling to the loops. It is possible to display bottles, gears, books, tools, and other large objects on the board and to take them off easily. A one-inch square piece of the special hooked tape, properly applied, will hold 5–10 pounds, depending on the shape and leverage of the object.

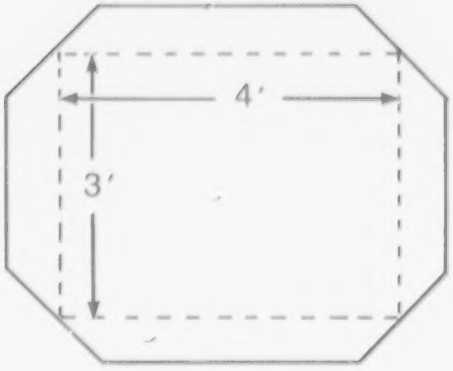
Magnetic Chalkboard

Another type of display board that is similar in function to the flannel board is the magnetic chalkboard—a chalkboard with a steel backing. It is, however, more versatile than the flannel board since you can use the surface to draw or write upon with chalk, as well as to display figures or objects.

Magnetized objects available commercially or other objects with small magnets attached to them can be used. These objects will adhere more securely to the surface than will flannel board figures, and they can be easily moved around on the board.

SAMPLE 2

INSTRUCTIONS FOR MAKING A FLANNEL BOARD



NOTE: Flannel can be stapled to the back or edges of the board.
Could have both sides covered with same or different color.
Frame could be built to cover stapled edges.

Material and Procedures

1. Use ¼", ⅜", or ½" plywood, hardboard, or wallboard as the base.
2. Cut base to desired size (3' × 4' in our sample). Most lumberyards or hardware stores will cut to your size when you buy.
3. Secure a piece of cotton flannel, flannelette, felt, suede, or other rough-napped cloth several inches larger than the board (42" × 54" in our sample). Make sure the material you get will hold the flannel figures you plan to make by testing the cloth before you buy or cut it.
4. After stretching the cloth over the board, fold the excess to the back side and secure with staples or tacks. If you want to cover both sides of the board, you may want to cut both pieces so that they just cover the edges of the board and are stapled to the edges.
5. If an easel is not available, you can hinge a piece of plywood to the back side or edges of the flannel board in such a way that the board will stand on a desk or table.

Select a student performance objective in your occupational specialty that could be achieved, at least partially, by presenting informaton using the flannel board. (In a real-world situation, you start with an objective and then select the most appropriate materials and teaching methods. In this practice situation, however, you need to select an objective that lends itself to using a flannel board to present information.)

Prepare a detailed lesson plan that includes an explanation of how the flannel board will be used to present information. Instead of developing a lesson plan, you may select a lesson plan that you have developed previously and adapt that plan so that it includes the use of flannel board to present information.

You may wish to have your resource person review the adequacy of your plan. He/she could use the Teacher Performance Assessment Form in Module B-4, *Develop a Lesson Plan*, as a guide.

Based on your lesson plan, obtain a flannel board and the flannel figures you will need to make your presentation. You may choose to make your own flannel board and flannel figures instead of obtaining them. The directions and specifications given on p. 10 could serve as a guide in helping you to construct your own flannel board.

In a simulated classroom situation, present your lesson to a group of at least two to five peers. These peers will serve two functions: (1) they will role-play the students to whom you are presenting your lesson, and (2) they will evaluate your performance. If peers are not available to you, you may present your lesson to your resource person.

If you wish to self-evaluate, you may record your performance on videotape so you may view your own lesson presentation at a later time.

Multiple copies of the Presentation Checklist: Flannel Board are provided in this learning experience, pp. 13–23. Give a copy to each peer or to your resource person before making your presentation in order to ensure that each knows what to look for in your lesson. However, indicate that, during the lesson, all attention is to be directed toward you and that the checklists are to be completed **after** the lesson is finished.

If you videotaped your lesson, you may wish to self-evaluate using a copy of the Presentation Checklist: Flannel Board, pp. 13–23.

14

PRESENTATION CHECKLIST: Flannel Board

Directions: Place an X in the NO, PARTIAL, or FULL box to indicate that each of the following performance components was not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

Name _____

Date _____

Resource Person _____

LEVEL OF PERFORMANCE

	N/A	No	Partial	Full
1. The use of the flannel board was appropriate in terms of the lesson objective to be met	☐	☐	☐	☐
2. The flannel board was used to introduce the lesson, highlight key points, or summarize the lesson	☐	☐	☐	☐
3. The teacher had prepared a script for the flannel board presentation	☐	☐	☐	☐
4. The teacher had all flannel board materials prepared and organized in advance	☐	☐	☐	☐
5. The teacher appeared natural and flexible in using the flannel board	☐	☐	☐	☐
6. The teacher presented ideas clearly, in a step-by-step sequence	☐	☐	☐	☐
7. The flannel board figures corresponded to the steps in the teacher's presentation	☐	☐	☐	☐
8. The flannel board and flannel figures were large enough so as to be visible to all students	☐	☐	☐	☐
9. The flannel figures were well spaced on the board	☐	☐	☐	☐
10. The teacher made effective use of color	☐	☐	☐	☐
11. The flannel figures were neat and attractive	☐	☐	☐	☐
12. The flannel figures adhered well to the board	☐	☐	☐	☐

Level of Performance: All items must receive FULL or N/A responses. If any item receives a NO or PARTIAL response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

NOTES

PRESENTATION CHECKLIST: Flannel Board

Directions: Place an X in the NO, PARTIAL, or FULL box to indicate that each of the following performance components was not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

Name: _____

Date: _____

Resource Person: _____

	LEVEL OF PERFORMANCE			
	N/A	No	Partial	Full
1. The use of the flannel board was appropriate in terms of the lesson objective to be met	☐	☐	☐	☐
2. The flannel board was used to introduce the lesson, highlight key points, or summarize the lesson	☐	☐	☐	☐
3. The teacher had prepared a script for the flannel board presentation	☐	☐	☐	☐
4. The teacher had all flannel board materials prepared and organized in advance	☐	☐	☐	☐
5. The teacher appeared natural and flexible in using the flannel board	☐	☐	☐	☐
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7. The flannel board figures corresponded to the steps in the teacher's presentation	☐	☐	☐	☐
8. The flannel board and flannel figures were large enough so as to be visible to all students	☐	☐	☐	☐
9. The flannel figures were well spaced on the board	☐	☐	☐	☐
10. The teacher made effective use of color	☐	☐	☐	☐
11. The flannel figures were neat and attractive	☐	☐	☐	☐
12. The flannel figures adhered well to the board	☐	☐	☐	☐

Level of Performance: All items must receive FULL or N/A responses. If any item receives a NO or PARTIAL response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

NOTES

PRESENTATION CHECKLIST: Flannel Board

Directions: Place an X in the NO, PARTIAL, or FULL box to indicate that each of the following performance components was not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

Name _____

Date _____

Resource Person _____

	LEVEL OF PERFORMANCE			
	N/A	No	Partial	Full
1. The use of the flannel board was appropriate in terms of the lesson objective to be met	☐	☐	☐	☐
2. The flannel board was used to introduce the lesson, highlight key points, or summarize the lesson	☐	☐	☐	☐
3. The teacher had prepared a script for the flannel board presentation	☐	☐	☐	☐
4. The teacher had all flannel board materials prepared and organized in advance	☐	☐	☐	☐
5. The teacher appeared natural and flexible in using the flannel board	☐	☐	☐	☐
6. The teacher presented ideas clearly, in a step-by-step sequence	☐	☐	☐	☐
7. The flannel board figures corresponded to the steps in the teacher's presentation	☐	☐	☐	☐
8. The flannel board and flannel figures were large enough so as to be visible to all students	☐	☐	☐	☐
9. The flannel figures were well spaced on the board	☐	☐	☐	☐
10. The teacher made effective use of color	☐	☐	☐	☐
11. The flannel figures were neat and attractive	☐	☐	☐	☐
12. The flannel figures adhered well to the board	☐	☐	☐	☐

Level of Performance: All items must receive FULL or N/A responses. If any item receives a NO or PARTIAL response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

NOTES

PRESENTATION CHECKLIST: Flannel Board

Directions: Place an X in the NO, PARTIAL, or FULL box to indicate that each of the following performance components was not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

Name _____

Date _____

Resource Person _____

	LEVEL OF PERFORMANCE			
	N/A	No	Partial	Full
1. The use of the flannel board was appropriate in terms of the lesson objective to be met	☐	☐	☐	☐
2. The flannel board was used to introduce the lesson, highlight key points, or summarize the lesson	☐	☐	☐	☐
3. The teacher had prepared a script for the flannel board presentation	☐	☐	☐	☐
4. The teacher had all flannel board materials prepared and organized in advance	☐	☐	☐	☐
5. The teacher appeared natural and flexible in using the flannel board	☐	☐	☐	☐
6. The teacher presented ideas clearly, in a step-by-step sequence	☐	☐	☐	☐
7. The flannel board figures corresponded to the steps in the teacher's presentation	☐	☐	☐	☐
8. The flannel board and flannel figures were large enough so as to be visible to all students	☐	☐	☐	☐
9. The flannel figures were well spaced on the board	☐	☐	☐	☐
10. The teacher made effective use of color	☐	☐	☐	☐
11. The flannel figures were neat and attractive	☐	☐	☐	☐
12. The flannel figures adhered well to the board	☐	☐	☐	☐

Level of Performance: All items must receive FULL or N/A responses. If any item receives a NO or PARTIAL response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

NOTES

PRESENTATION CHECKLIST: Flannel Board

Directions: Place an X in the NO, PARTIAL, or FULL box to indicate that each of the following performance components was not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

Name _____

Date _____

Resource Person _____

LEVEL OF PERFORMANCE

	N/A	No	Partial	Full
1. The use of the flannel board was appropriate in terms of the lesson objective to be met	☐	☐	☐	☐
2. The flannel board was used to introduce the lesson, highlight key points, or summarize the lesson	☐	☐	☐	☐
3. The teacher had prepared a script for the flannel board presentation	☐	☐	☐	☐
4. The teacher had all flannel board materials prepared and organized in advance	☐	☐	☐	☐
5. The teacher appeared natural and flexible in using the flannel board	☐	☐	☐	☐
6. The teacher presented ideas clearly, in a step-by-step sequence	☐	☐	☐	☐
7. The flannel board figures corresponded to the steps in the teacher's presentation	☐	☐	☐	☐
8. The flannel board and flannel figures were large enough so as to be visible to all students	☐	☐	☐	☐
9. The flannel figures were well spaced on the board	☐	☐	☐	☐
10. The teacher made effective use of color	☐	☐	☐	☐
11. The flannel figures were neat and attractive	☐	☐	☐	☐
12. The flannel figures adhered well to the board	☐	☐	☐	☐

Level of Performance: All items must receive FULL or N/A responses. If any item receives a NO or PARTIAL response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

NOTES

PRESENTATION CHECKLIST: Flannel Board

Directions: Place an X in the NO, PARTIAL, or FULL box to indicate that each of the following performance components was not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

Name _____

Date _____

Resource Person _____

	LEVEL OF PERFORMANCE			
	N/A	No	Partial	Full
1. The use of the flannel board was appropriate in terms of the lesson objective to be met	☐	☐	☐	☐
2. The flannel board was used to introduce the lesson, highlight key points, or summarize the lesson	☐	☐	☐	☐
3. The teacher had prepared a script for the flannel board presentation	☐	☐	☐	☐
4. The teacher had all flannel board materials prepared and organized in advance	☐	☐	☐	☐
5. The teacher appeared natural and flexible in using the flannel board	☐	☐	☐	☐
6. The teacher presented ideas clearly, in a step-by-step sequence	☐	☐	☐	☐
7. The flannel board figures corresponded to the steps in the teacher's presentation	☐	☐	☐	☐
8. The flannel board and flannel figures were large enough so as to be visible to all students	☐	☐	☐	☐
9. The flannel figures were well spaced on the board	☐	☐	☐	☐
10. The teacher made effective use of color	☐	☐	☐	☐
11. The flannel figures were neat and attractive	☐	☐	☐	☐
12. The flannel figures adhered well to the board	☐	☐	☐	☐

Level of Performance: All items must receive FULL or N/A responses. If any item receives a NO or PARTIAL response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

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NOTES

Learning Experience II

OVERVIEW

After completing the required reading, present information with a model or real object.

You will be reading the information sheet, Using Models and Real Objects, pp. 27–28.

You will be selecting an objective in your occupational specialty that lends itself to using a model or real object to present information.

You will be selecting, modifying, or developing a lesson plan designed to achieve that objective using a model or real object to present information.

You may wish to have your resource person review the adequacy of your plan.

You will be obtaining or making the model or real object needed for your presentation.

You will be presenting the lesson to a group of peers or to your resource person.

You may wish to record your presentation on videotape for self-evaluation purposes.

Your competency in presenting information with a model or real object will be evaluated by your peers or by your resource person, using copies of the Presentation Checklist: Model or Real Object, pp. 31–41.

If you videotape your presentation, you may wish to evaluate your own performance, using a copy of the Presentation Checklist: Model or Real Object, pp. 31–41.

For information describing the use of models and real objects in presenting information, how to plan for their use, and how to select which device would be most appropriate for a particular lesson objective, read the following information sheet.

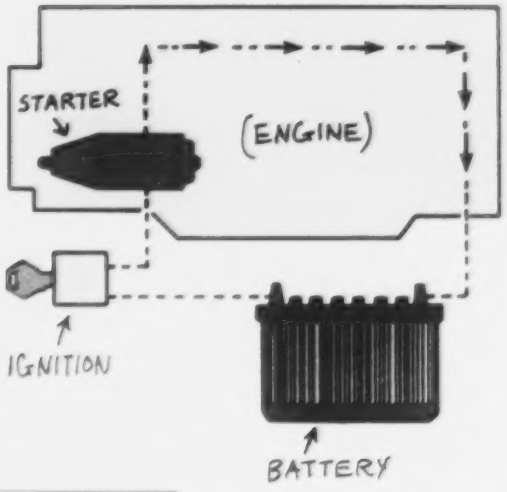
USING MODELS AND REAL OBJECTS

Models and real objects can be used to provide concrete and firsthand experiences in your classroom. They lend tangible, material support to abstract ideas.

A **model** is a "recognizable imitation of the real thing with an increase or decrease in size as the chief difference."[1] A model can be built exactly to **scale** (e.g., a larger than life-sized scale model of the human brain). Or it can be a **simplified** version of the original (e.g., a landscaping model in which the proportions do not correspond precisely to the original).

A **cutaway** or **cross-sectional** model allows viewers to see the parts or processes inside the original (e.g., a larger than life-sized cross-sectional model of a tooth, made to exact or approximate scale).

A **mock-up** is a special form of model. At one time the term referred to a full-sized replica of the original (e.g., an automobile). Now, it more commonly refers to a simplified version of the orginal, in which "a certain element of the original is highlighted or emphasized to make it more meaningful for the student"[2] (e.g., a mock-up of an automobile ignition system in which only the basic process is revealed).



Before deciding to use one of these devices to present information, you should carefully consider their specific instructional uses and then ask yourself the following questions:

- Is it appropriate, given the student performance objective(s) to be achieved?
- Will it contribute significantly toward student attainment of the performance objectives?
- Can the lesson content be presented more efficiently and/or effectively with a model/real object for students to view, touch, or manipulate?
- Is the required model/real object available or easily secured or constructed?

How do you decide which device—a model or a real object—to use to present information? Again, this decision depends on the particular student performance objectives. In general, you should try to use real objects whenever possible, since the ultimate goal of instruction is to bring the student to an understanding of the real world.

However, models can be more advantageous in certain situations—for example, when you need to show a normally invisible interior view of a real object.

Take, for example, a situation in which the instructional objective is to help students understand the support structures of a house and how they are assembled. To see a real house in the process of being built would be ideal, but this is sometimes impractical. A cutaway model of a house, with nonessential parts removed, is often better for the purpose of giving the students a visual understanding of house support structures.

A model can also be more useful to you than a real object in some cases because certain features of a model can be emphasized through the use of bright color, contrasting texture, or removable parts.

Worn bearings, for example, are often difficult to see unless the light falls on them at a particular angle. A large scale model—with brightly painted surface scratches or worn spots finished in a contrasting texture—will help students learn what to look for when they diagnose a real set of faulty bearings.

1. Edgar Dale, *Audiovisual Methods in Teaching*, Third Edition (Hinsdale IL: The Dryden Press, 1969), p. 215.

2. Dale, *Audiovisual Methods in Teaching*, p. 230.

Objects and models that can be manipulated or used are better devices than those that can only be looked at. The more senses that are used in the learning process, the easier it is to learn and remember the material being covered. Often students can benefit by being involved in planning and constructing a model, thus gaining an even more intimate knowledge of the real object it represents.

A model or real object—no matter how intricately constructed or expensive it may be—is not really useful unless the students understand why they are using it, what it represents, and how it works. When using these teaching aids to present information, you should give students time to ask questions and discuss their observations. Models and real objects should be used to encourage students to think through an idea and to practice explaining, in their own words, the process or principle being illustrated.

How do you determine whether a model or real object is an effective teaching device? The final test is how students react. If you use an aid that arouses students' curiosity, answers their questions, provides them with firsthand experience with a process or principle, or leads them to a deeper knowledge of a subject, you have been successful.

Thus, after you have used either a model or a real object to present information, you should reevaluate your choice by asking yourself the following questions:

- Why did I use the model or real object? Did it contribute to the lesson in a significant way?
- Did my students understand the point of the model or real object?
- Can students manipulate or use the model or real object, or is it merely something to look at, like a diagram or a transparency?
- Did students display an interest in the model or real object? Did they discuss it, study it, or ask questions about it?
- Did using the model or real object help students attain a deeper understanding of a subject?

Select a student performance objective in your occupational specialty that could be achieved, at least partially, by presenting information using a model or real object. (In a real-world situation, you start with an objective and then select the most appropriate materials and teaching methods. In this practice situation, however, you need to select an objective that lends itself to using a model or real object to present information.)

Prepare a detailed lesson plan that includes an explanation of how the model or real object will be used to present information. Instead of developing a lesson plan, you may select a lesson plan that you have developed previously and adapt that plan so that it includes the use of a model or real object to present information.

You may wish to have your resource person review the adequacy of your plan. He/she could use the Teacher Performance Assessment Form in Module B-4, *Develop a Lesson Plan*, as a guide.

Based on your lesson plan, obtain the model or real object you will need to make your presentation. You may choose to make your own model instead of obtaining one.

In a simulated classroom situation, present your lesson to a group of at least two to five peers. These peers will serve two functions: (1) they will role-play the students to whom you are presenting your lesson, and (2) they will evaluate your performance. If peers are not available to you, you may present your lesson to your resource person.

If you wish to self-evaluate, you may record your performance on videotape so you may view your own lesson presentation at a later time.

Multiple copies of the Presentation Checklist: Model or Real Object are provided in this learning experience, pp. 31–41. Give a copy to each peer or to your resource person before making your presentation in order to ensure that each knows what to look for in your lesson. However, indicate that, during the lesson, all attention is to be directed toward you and that the checklists are to be completed **after** the lesson is finished.

If you videotaped your lesson, you may wish to self-evaluate using a copy of the Presentation Checklist: Model or Real Object, pp. 31–41.

PRESENTATION CHECKLIST: Model or Real Object

Directions: Place an X in the NO, PARTIAL, or FULL box to indicate that each of the following performance components was not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

Name _____

Date _____

Resource Person _____

LEVEL OF PERFORMANCE

	N/A	No	Partial	Full
In using a model or real object, the teacher:				
1. chose the most appropriate device—model or real object—for the instructional purpose	☐	☐	☐	☐
2. allowed students to touch and handle the model or real object	☐	☐	☐	☐
The model or real object:				
3. contributed significantly toward student attainment of performance objectives	☐	☐	☐	☐
4. stimulated student interest in the lesson, causing them to discuss it, study it, or ask questions about it	☐	☐	☐	☐
5. helped students attain a deeper understanding of the lesson content	☐	☐	☐	☐
If the teacher used a model to present information:				
6. students understood the design or function of the model	☐	☐	☐	☐
7. the model was a recognizable imitation of the real object	☐	☐	☐	☐
8. the decision to use a scale model, simplified model, cutaway or cross-sectional model, or mock-up was based on the lesson objectives, student needs, and available resources	☐	☐	☐	☐
9. the model provided interior views, allowing fundamentals to be observed more easily by having nonessentials removed (optional)	☐	☐	☐	☐
10. specific features in the model were accented through the use of color, texture, or moving parts (optional)	☐	☐	☐	☐
11. students were involved in making or constructing the model (optional)	☐	☐	☐	☐
If the teacher used a real object to present information:				
12. the students understood how the real object worked or why it was used in the lesson	☐	☐	☐	☐
13. the real object was accessible to students in terms of location	☐	☐	☐	☐

Level of Performance: All items must receive FULL or N/A responses. If any item receives a NO or PARTIAL response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

NOTES

PRESENTATION CHECKLIST: Model or Real Object

Directions: Place an X in the NO, PARTIAL, or FULL box to indicate that each of the following performance components was not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

Name _____

Date _____

Resource Person _____

	LEVEL OF PERFORMANCE			
	N/A	No	Partial	Full
In using a model or real object, the teacher:				
1. chose the most appropriate device—model or real object—for the instructional purpose	☐	☐	☐	☐
2. allowed students to touch and handle the model or real object	☐	☐	☐	☐
The model or real object:				
3. contributed significantly toward student attainment of performance objectives	☐	☐	☐	☐
4. stimulated student interest in the lesson, causing them to discuss it, study it, or ask questions about it	☐	☐	☐	☐
5. helped students attain a deeper understanding of the lesson content	☐	☐	☐	☐
If the teacher used a model to present information:				
6. students understood the design or function of the model	☐	☐	☐	☐
7. the model was a recognizable imitation of the real object	☐	☐	☐	☐
8. the decision to use a scale model, simplified model, cutaway or cross-sectional model, or mock-up was based on the lesson objectives, student needs, and available resources	☐	☐	☐	☐
9. the model provided interior views, allowing fundamentals to be observed more easily by having nonessentials removed (optional)	☐	☐	☐	☐
10. specific features in the model were accented through the use of color, texture, or moving parts (optional)	☐	☐	☐	☐
11. students were involved in making or constructing the model (optional)	☐	☐	☐	☐
If the teacher used a real object to present information:				
12. the students understood how the real object worked or why it was used in the lesson	☐	☐	☐	☐
13. the real object was accessible to students in terms of location	☐	☐	☐	☐

Level of Performance: All items must receive FULL or N/A responses. If any item receives a NO or PARTIAL response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

NOTES

PRESENTATION CHECKLIST: Model or Real Object

Directions: Place an X in the NO, PARTIAL, or FULL box to indicate that each of the following performance components was not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

Name _____

Date _____

Resource Person _____

	LEVEL OF PERFORMANCE			
	N/A	No	Partial	Full
In using a model or real object, the teacher:				
1. chose the most appropriate device—model or real object—for the instructional purpose	☐	☐	☐	☐
2. allowed students to touch and handle the model or real object	☐	☐	☐	☐
The model or real object:				
3. contributed significantly toward student attainment of performance objectives	☐	☐	☐	☐
4. stimulated student interest in the lesson, causing them to discuss it, study it, or ask questions about it	☐	☐	☐	☐
5. helped students attain a deeper understanding of the lesson content	☐	☐	☐	☐
If the teacher used a model to present information:				
6. students understood the design or function of the model	☐	☐	☐	☐
7. the model was a recognizable imitation of the real object	☐	☐	☐	☐
8. the decision to use a scale model, simplified model, cutaway or cross-sectional model, or mock-up was based on the lesson objectives, student needs, and available resources	☐	☐	☐	☐
9. the model provided interior views, allowing fundamentals to be observed more easily by having nonessentials removed (optional)	☐	☐	☐	☐
10. specific features in the model were accented through the use of color, texture, or moving parts (optional)	☐	☐	☐	☐
11. students were involved in making or constructing the model (optional)	☐	☐	☐	☐
If the teacher used a real object to present information:				
12. the students understood how the real object worked or why it was used in the lesson	☐	☐	☐	☐
13. the real object was accessible to students in terms of location	☐	☐	☐	☐

Level of Performance: All items must receive FULL or N/A responses. If any item receives a NO or PARTIAL response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

NOTES

PRESENTATION CHECKLIST: Model or Real Object

Directions: Place an X in the NO, PARTIAL, or FULL box to indicate that each of the following performance components was not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

Name _____

Date _____

Resource Person _____

	LEVEL OF PERFORMANCE			
	N/A	No	Partial	Full
In using a model or real object, the teacher:				
1. chose the most appropriate device—model or real object—for the instructional purpose	☐	☐	☐	☐
2. allowed students to touch and handle the model or real object	☐	☐	☐	☐
The model or real object:				
3. contributed significantly toward student attainment of performance objectives	☐	☐	☐	☐
4. stimulated student interest in the lesson, causing them to discuss it, study it, or ask questions about it	☐	☐	☐	☐
5. helped students attain a deeper understanding of the lesson content	☐	☐	☐	☐
If the teacher used a model to present information:				
6. students understood the design or function of the model	☐	☐	☐	☐
7. the model was a recognizable imitation of the real object	☐	☐	☐	☐
8. the decision to use a scale model, simplified model, cutaway or cross-sectional model, or mock-up was based on the lesson objectives, student needs, and available resources	☐	☐	☐	☐
9. the model provided interior views, allowing fundamentals to be observed more easily by having nonessentials removed (optional)	☐	☐	☐	☐
10. specific features in the model were accented through the use of color, texture, or moving parts (optional)	☐	☐	☐	☐
11. students were involved in making or constructing the model (optional)	☐	☐	☐	☐
If the teacher used a real object to present information:				
12. the students understood how the real object worked or why it was used in the lesson	☐	☐	☐	☐
13. the real object was accessible to students in terms of location	☐	☐	☐	☐

Level of Performance: All items must receive FULL or N/A responses. If any item receives a NO or PARTIAL response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

NOTES

PRESENTATION CHECKLIST: Model or Real Object

Directions: Place an X in the NO, PARTIAL, or FULL box to indicate that each of the following performance components was not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

Name _____

Date _____

Resource Person _____

	LEVEL OF PERFORMANCE			
	N/A	No	Partial	Full
In using a model or real object, the teacher:				
1. chose the most appropriate device—model or real object—for the instructional purpose	☐	☐	☐	☐
2. allowed students to touch and handle the model or real object	☐	☐	☐	☐
The model or real object:				
3. contributed significantly toward student attainment of performance objectives	☐	☐	☐	☐
4. stimulated student interest in the lesson, causing them to discuss it, study it, or ask questions about it	☐	☐	☐	☐
5. helped students attain a deeper understanding of the lesson content	☐	☐	☐	☐
If the teacher used a model to present information:				
6. students understood the design or function of the model	☐	☐	☐	☐
7. the model was a recognizable imitation of the real object	☐	☐	☐	☐
8. the decision to use a scale model, simplified model, cutaway or cross-sectional model, or mock-up was based on the lesson objectives, student needs, and available resources	☐	☐	☐	☐
9. the model provided interior views, allowing fundamentals to be observed more easily by having nonessentials removed (optional)	☐	☐	☐	☐
10. specific features in the model were accented through the use of color, texture, or moving parts (optional)	☐	☐	☐	☐
11. students were involved in making or constructing the model (optional)	☐	☐	☐	☐
If the teacher used a real object to present information:				
12. the students understood how the real object worked or why it was used in the lesson	☐	☐	☐	☐
13. the real object was accessible to students in terms of location	☐	☐	☐	☐

Level of Performance: All items must receive FULL or N/A responses. If any item receives a NO or PARTIAL response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

NOTES

PRESENTATION CHECKLIST: Model or Real Object

Directions: Place an X in the NO, PARTIAL, or FULL box to indicate that each of the following performance components was not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

Name _____

Date _____

Resource Person _____

LEVEL OF PERFORMANCE

	N/A	No	Partial	Full
In using a model or real object, the teacher:				
1. chose the most appropriate device—model or real object—for the instructional purpose	☐	☐	☐	☐
2. allowed students to touch and handle the model or real object	☐	☐	☐	☐
The model or real object:				
3. contributed significantly toward student attainment of performance objectives	☐	☐	☐	☐
4. stimulated student interest in the lesson, causing them to discuss it, study it, or ask questions about it	☐	☐	☐	☐
5. helped students attain a deeper understanding of the lesson content	☐	☐	☐	☐
If the teacher used a model to present information:				
6. students understood the design or function of the model	☐	☐	☐	☐
7. the model was a recognizable imitation of the real object	☐	☐	☐	☐
8. the decision to use a scale model, simplified model, cutaway or cross-sectional model, or mock-up was based on the lesson objectives, student needs, and available resources	☐	☐	☐	☐
9. the model provided interior views, allowing fundamentals to be observed more easily by having nonessentials removed (optional)	☐	☐	☐	☐
10. specific features in the model were accented through the use of color, texture, or moving parts (optional)	☐	☐	☐	☐
11. students were involved in making or constructing the model (optional)	☐	☐	☐	☐
If the teacher used a real object to present information:				
12. the students understood how the real object worked or why it was used in the lesson	☐	☐	☐	☐
13. the real object was accessible to students in terms of location	☐	☐	☐	☐

Level of Performance: All items must receive FULL or N/A responses. If any item receives a NO or PARTIAL response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

NOTES

Learning Experience III

FINAL EXPERIENCE

In an **actual teaching situation,*** present information with a flannel board and a model or real object.

As you plan your lessons, decide when a flannel board and a model or real object could be used effectively to aid in meeting the lesson objectives. Based on those decisions, present information with a flannel board and a model or real object. This will include—

- deciding whether you wish to teach a **single lesson** that incorporates the use of both techniques or **two lessons**, one using a flannel board and one using a model or real object
- selecting, modifying, or developing one or more lesson plan(s) that include the use of these techniques
- selecting, obtaining, or preparing the necessary materials
- presenting the lesson(s) to the class

NOTE: Your resource person may want you to submit your written lesson plan(s) to him/her for evaluation before you present your lesson(s). It may be helpful for your resource person to use the TPAF from Module B-4, *Develop a Lesson Plan*, to guide his/her evaluation.

Arrange in advance to have your resource person observe your lesson presentation(s).

Your total competency will be assessed by your resource person, using the Teacher Performance Assessment Form, pp. 45–46.

Based upon the criteria specified in this assessment instrument, your resource person will determine whether you are competent in presenting information with a flannel board and a model or real object.

* For a definition of "actual teaching situation," see the inside back cover.

NOTES

TEACHER PERFORMANCE ASSESSMENT FORM

Present Information with Models, Real Objects, and Flannel Boards (C-22)

Name _____

Date _____

Resource Person _____

Directions: Indicate the level of the teacher's accomplishment by placing an X in the appropriate box under the LEVEL OF PERFORMANCE heading. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

	LEVEL OF PERFORMANCE					
Flannel Board	N/A	None	Poor	Fair	Good	Excellent
1. The use of the flannel board was appropriate in terms of the lesson objective to be met	☐	☐	☐	☐	☐	☐
2. The flannel board was used to introduce the lesson, highlight key points, or summarize the lesson	☐	☐	☐	☐	☐	☐
3. The teacher had prepared a script for the flannel board presentation	☐	☐	☐	☐	☐	☐
4. The teacher had all flannel board materials prepared and organized in advance	☐	☐	☐	☐	☐	☐
5. The teacher appeared natural and flexible in using the flannel board	☐	☐	☐	☐	☐	☐
6. The teacher presented ideas clearly, in a step-by-step sequence	☐	☐	☐	☐	☐	☐
7. The flannel board figures corresponded to the steps in the teacher's presentation	☐	☐	☐	☐	☐	☐
8. The flannel board and flannel figures were large enough so as to be visible to all students	☐	☐	☐	☐	☐	☐
9. The flannel figures were well spaced on the board	☐	☐	☐	☐	☐	☐
10. The teacher made effective use of color	☐	☐	☐	☐	☐	☐
11. The flannel figures were neat and attractive	☐	☐	☐	☐	☐	☐
12. The flannel figures adhered well to the board	☐	☐	☐	☐	☐	☐

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Model or Real Object

	N/A	None	Poor	Fair	Good	Excellent
In using the model or real object, the teacher:						
13. chose the most appropriate device—model or real object—for the instructional purpose	☐	☐	☐	☐	☐	☐
14. allowed students to touch and handle the model or real object	☐	☐	☐	☐	☐	☐
The model or real object:						
15. contributed significantly toward student attainment of performance objectives	☐	☐	☐	☐	☐	☐
16. stimulated student interest in the lesson, causing them to discuss it, study it, or ask questions about it	☐	☐	☐	☐	☐	☐
17. helped students attain a deeper understanding of the lesson content	☐	☐	☐	☐	☐	☐
If the teacher used a model to present information:						
18. students understood the design or function of the model	☐	☐	☐	☐	☐	☐
19. the model was a recognizable imitation of the real object	☐	☐	☐	☐	☐	☐
20. the decision to use a scale model, simplified model, cutaway or cross-sectional model, or mock-up was based on the lesson objectives, student needs, and available resources	☐	☐	☐	☐	☐	☐
21. the model provided interior views, allowing fundamentals to be observed more easily by having nonessentials removed (optional)	☐	☐	☐	☐	☐	☐
22. specific features in the model were accented through the use of color, texture, or moving parts (optional)	☐	☐	☐	☐	☐	☐
23. students were involved in making or constructing the model (optional)	☐	☐	☐	☐	☐	☐
If the teacher used a real object to present information:						
24. the students understood how the real object worked or why it was used in the lesson	☐	☐	☐	☐	☐	☐
25. the real object was accessible to students in terms of location	☐	☐	☐	☐	☐	☐

Level of Performance: All items must receive N/A, GOOD, or EXCELLENT responses. If any item receives a NONE, POOR, or FAIR response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

NOTES

NOTES

ABOUT USING THE NATIONAL CENTER'S PBTE MODULES

Organization

Each module is designed to help you gain competency in a particular skill area considered important to teaching success. A module is made up of a series of learning experiences, some providing background information, some providing practice experiences, and others combining these two functions. Completing these experiences should **enable** you to achieve the **terminal** objective in the final learning experience. The final experience in each module always requires you to demonstrate the skill in an actual teaching situation when you are an intern, a student teacher, an inservice teacher, or occupational trainer.

Procedures

Modules are designed to allow you to individualize your teacher education program. You need to take only those modules covering skills that you do not already possess. Similarly, you need not complete any learning experience within a module if you already have the skill needed to complete it. Therefore, before taking any module, you should carefully review (1) the introduction, (2) the objectives listed on p. 4, (3) the overviews preceding each learning experience, and (4) the final experience. After comparing your present needs and competencies with the information you have read in these sections, you should be ready to make one of the following decisions:

- That you do not have the competencies indicated and should complete the entire module
- That you are competent in one or more of the enabling objectives leading to the final learning experience and, thus, can omit those learning experiences
- That you are already competent in this area and are ready to complete the final learning experience in order to "test out"
- That the module is inappropriate to your needs at this time

When you are ready to complete the final learning experience **and** have access to an actual teaching situation, make the necessary arrangements with your resource person. If you do not complete the final experience successfully, meet with your resource person and arrange to (1) repeat the experience or (2) complete (or review) previous sections of the module or other related activities suggested by your resource person before attempting to repeat the final experience.

Options for recycling are also available in each of the learning experiences preceding the final experience. Any time you do not meet the minimum level of performance required to meet an objective, you and your resource person may meet to select activities to help you reach competency. This could involve (1) completing parts of the module previously skipped, (2) repeating activities, (3) reading supplementary resources or completing additional activities suggested by the resource person, (4) designing your own learning experience, or (5) completing some other activity suggested by you or your resource person.

Terminology

Actual Teaching Situation: A situation in which you are actually working with and responsible for teaching secondary or postsecondary vocational students or other occupational trainees. An intern, a student teacher, an inservice teacher, or other occupational trainer would be functioning in an actual teaching situation. If you do **not** have access to an actual teaching situation when you are taking the module, you can complete the module **up to** the final learning experience. You would then complete the final learning experience later (i.e., when you have access to an actual teaching situation).

Alternate Activity or Feedback: An item that may **substitute** for required items that, due to special circumstances, you are unable to complete.

Occupational Specialty: A specific area of preparation within a vocational service area (e.g., the service area Trade and Industrial Education includes occupational specialties such as automobile mechanics, welding, and electricity.

Optional Activity or Feedback: An item that is not required but that is designed to **supplement** and enrich the required items in a learning experience.

Resource Person: The person in charge of your educational program (e.g., the professor, instructor, administrator, instructional supervisor, cooperating/supervising/classroom teacher, or training supervisor who is guiding you in completing this module).

Student: The person who is receiving occupational instruction in a secondary, postsecondary, or other training program.

Vocational Service Area: A major vocational field: agricultural education, business and office education, marketing and distributive education, health occupations education, home economics education, industrial arts education, technical education, or trade and industrial education.

You or the Teacher/Instructor: The person who is completing the module.

Levels of Performance for Final Assessment

N/A: The criterion was not met because it was **not applicable** to the situation.

None: No attempt was made to meet the criterion, although it was relevant.

Poor: The teacher is unable to perform this skill or has only **very limited ability** to perform it.

Fair: The teacher is unable to perform this skill in an acceptable manner but has **some ability** to perform it.

Good: The teacher is able to perform this skill in an **effective** manner.

Excellent: The teacher is able to perform this skill in a **very effective** manner.

Titles of the National Center's Performance-Based Teacher Education Modules

Category A: Program Planning, Development, and Evaluation
- A-1 Prepare for a Community Survey
- A-2 Conduct a Community Survey
- A-3 Report the Findings of a Community Survey
- A-4 Organize an Occupational Advisory Committee
- A-5 Maintain an Occupational Advisory Committee
- A-6 Develop Program Goals and Objectives
- A-7 Conduct an Occupational Analysis
- A-8 Develop a Course of Study
- A-9 Develop Long-Range Program Plans
- A-10 Conduct a Student Follow-Up Study
- A-11 Evaluate Your Vocational Program

Category B: Instructional Planning
- B-1 Determine Needs and Interests of Students
- B-2 Develop Student Performance Objectives
- B-3 Develop a Unit of Instruction
- B-4 Develop a Lesson Plan
- B-5 Select Student Instructional Materials
- B-6 Prepare Teacher-Made Instructional Materials

Category C: Instructional Execution
- C-1 Direct Field Trips
- C-2 Conduct Group Discussions, Panel Discussions, and Symposiums
- C-3 Employ Brainstorming, Buzz Group, and Question Box Techniques
- C-4 Direct Students in Instructing Other Students
- C-5 Employ Simulation Techniques
- C-6 Guide Student Study
- C-7 Direct Student Laboratory Experience
- C-8 Direct Students in Applying Problem-Solving Techniques
- C-9 Employ the Project Method
- C-10 Introduce a Lesson
- C-11 Summarize a Lesson
- C-12 Employ Oral Questioning Techniques
- C-13 Employ Reinforcement Techniques
- C-14 Provide Instruction for Slower and More Capable Learners
- C-15 Present an Illustrated Talk
- C-16 Demonstrate a Manipulative Skill
- C-17 Demonstrate a Concept or Principle
- C-18 Individualize Instruction
- C-19 Employ the Team Teaching Approach
- C-20 Use Subject Matter Experts to Present Information
- C-21 Prepare Bulletin Boards and Exhibits
- C-22 Present Information with Models, Real Objects, and Flannel Boards
- C-23 Present Information with Overhead and Opaque Materials
- C-24 Present Information with Filmstrips and Slides
- C-25 Present Information with Films
- C-26 Present Information with Audio Recordings
- C-27 Present Information with Televised and Videotaped Materials
- C-28 Employ Programmed Instruction
- C-29 Present Information with the Chalkboard and Flip Chart

Category D: Instructional Evaluation
- D-1 Establish Student Performance Criteria
- D-2 Assess Student Performance: Knowledge
- D-3 Assess Student Performance: Attitudes
- D-4 Assess Student Performance: Skills
- D-5 Determine Student Grades
- D-6 Evaluate Your Instructional Effectiveness

Category E: Instructional Management
- E-1 Project Instructional Resource Needs
- E-2 Manage Your Budgeting and Reporting Responsibilities
- E-3 Arrange for Improvement of Your Vocational Facilities
- E-4 Maintain a Filing System
- E-5 Provide for Student Safety
- E-6 Provide for the First Aid Needs of Students
- E-7 Assist Students in Developing Self-Discipline
- E-8 Organize the Vocational Laboratory
- E-9 Manage the Vocational Laboratory
- E-10 Combat Problems of Student Chemical Use

Category F: Guidance
- F-1 Gather Student Data Using Formal Data-Collection Techniques
- F-2 Gather Student Data Through Personal Contacts
- F-3 Use Conferences to Help Meet Student Needs
- F-4 Provide Information on Educational and Career Opportunities
- F-5 Assist Students in Applying for Employment or Further Education

Category G: School-Community Relations
- G-1 Develop a School-Community Relations Plan for Your Vocational Program
- G-2 Give Presentations to Promote Your Vocational Program
- G-3 Develop Brochures to Promote Your Vocational Program
- G-4 Prepare Displays to Promote Your Vocational Program
- G-5 Prepare News Releases and Articles Concerning Your Vocational Program
- G-6 Arrange for Television and Radio Presentations Concerning Your Vocational Program
- G-7 Conduct an Open House
- G-8 Work with Members of the Community
- G-9 Work with State and Local Educators
- G-10 Obtain Feedback about Your Vocational Program

Category H: Vocational Student Organization
- H-1 Develop a Personal Philosophy Concerning Vocational Student Organizations
- H-2 Establish a Vocational Student Organization
- H-3 Prepare Vocational Student Organization Members for Leadership Roles
- H-4 Assist Vocational Student Organization Members in Developing and Financing a Yearly Program of Activities
- H-5 Supervise Activities of the Vocational Student Organization
- H-6 Guide Participation in Vocational Student Organization Contests

Category I: Professional Role and Development
- I-1 Keep Up-to-date Professionally
- I-2 Serve Your Teaching Profession
- I-3 Develop an Active Personal Philosophy of Education
- I-4 Serve the School and Community
- I-5 Obtain a Suitable Teaching Position
- I-6 Provide Laboratory Experiences for Prospective Teachers
- I-7 Plan the Student Teaching Experience
- I-8 Supervise Student Teachers

Category J: Coordination of Cooperative Education
- J-1 Establish Guidelines for Your Cooperative Vocational Program
- J-2 Manage the Attendance, Transfers, and Terminations of Co-op Students
- J-3 Enroll Students in Your Co-op Program
- J-4 Secure Training Stations for Your Co-op Program
- J-5 Place Co-op Students on the Job
- J-6 Develop the Training Ability of On-the-Job Instructors
- J-7 Coordinate On-the-Job Instruction
- J-8 Evaluate Co-op Students' On-the-Job Performance
- J-9 Prepare for Students' Related Instruction
- J-10 Supervise an Employer-Employee Appreciation Event

Category K: Implementing Competency-Based Education (CBE)
- K-1 Prepare Yourself for CBE
- K-2 Organize the Content for a CBE Program
- K-3 Organize Your Class and Lab to Install CBE
- K-4 Provide Instructional Materials for CBE
- K-5 Manage the Daily Routines of Your CBE Program
- K-6 Guide Your Students Through the CBE Program

Category L: Serving Students with Special/Exceptional Needs
- L-1 Prepare Yourself to Serve Exceptional Students
- L-2 Identify and Diagnose Exceptional Students
- L-3 Plan Instruction for Exceptional Students
- L-4 Provide Appropriate Instructional Materials for Exceptional Students
- L-5 Modify the Learning Environment for Exceptional Students
- L-6 Promote Peer Acceptance of Exceptional Students
- L-7 Use Instructional Techniques to Meet the Needs of Exceptional Students
- L-8 Improve Your Communication Skills
- L-9 Assess the Progress of Exceptional Students
- L-10 Counsel Exceptional Students with Personal-Social Problems
- L-11 Assist Exceptional Students in Developing Career Planning Skills
- L-12 Prepare Exceptional Students for Employability
- L-13 Promote Your Vocational Program with Exceptional Students

Category M: Assisting Students in Improving Their Basic Skills
- M-1 Assist Students in Achieving Basic Reading Skills
- M-2 Assist Students in Developing Technical Reading Skills
- M-3 Assist Students in Improving Their Writing Skills
- M-4 Assist Students in Improving Their Oral Communication Skills
- M-5 Assist Students in Improving Their Math Skills
- M-6 Assist Students in Improving Their Survival Skills

Category N: Teaching Adults
- N-1 Prepare to Work with Adult Learners
- N-2 Market an Adult Education Program
- N-3 Determine Individual Training Needs
- N-4 Plan Instruction for Adults
- N-5 Manage the Adult Instructional Process
- N-6 Evaluate the Performance of Adults

RELATED PUBLICATIONS

Student Guide to Using Performance-Based Teacher Education Materials
Resource Person Guide to Using Performance-Based Teacher Education Materials
Guide to the Implementation of Performance-Based Teacher Education
Performance-Based Teacher Education: The State of the Art, General Education and Vocational Education

For information regarding availability and prices of these materials contact— AAVIM, American Association for Vocational Instructional Materials, 120 Driftmier Engineering Center, University of Georgia, Athens, Georgia 30602, (404) 542-2586

ISBN 0-89606-221-X